

## Claims

1. Method for reporting a malfunction of a faulty network node (K1) in a communication network comprising a number of network nodes (K1 ..K9),

5 characterized in that each operable network node (K2 ..K9) forwards a fault report of the faulty network node (K1) to all network nodes (Kx) which are directly adjacent to the operable network node, except in cases in which a fault report is received which has already  
10 been forwarded.

2. Method in accordance with claim 1, characterized in that, a faulty network node (K1) sends a fault report to all network nodes (K2, K3, K4, K5) directly adjacent to it.

3. Method in accordance with claim 1, characterized in  
15 that,  
- an operable network node (K2) continuously sends a message to be acknowledged to all its directly adjacent network nodes (K1, K6, K7),  
- this operable network node (K2) creates a fault report for  
20 a network node (K1) from which no acknowledgement was received, and  
- this operable network node (K2) sends this fault report to all network nodes (K1, K6, K7) directly adjacent to it.

4. Method in accordance with claim 3, characterized in  
25 that,  
- the fault report relates to the faulty network node (K1) itself if all its neighboring network nodes (K2, K3, K4, K5) identify a fault and  
- the fault report relates to the connection to the faulty  
30 network node (K1) if not all its neighboring network nodes (K2, K3, K4, K5) identify a fault.

5. Method in accordance with one of the claims 1 to 4, characterized in that a network node (K) which executes higher-ranking functions deduces further steps from the receipt of a fault report.

5 6. Network node (K2), including

- means for receiving a fault report of a faulty network node (K1),
- means for forwarding this fault report to all its directly adjacent network nodes (K1, K6, K7),

10 characterized in that

- this comprises means for checking whether this fault report has already been forwarded, and
  - this comprises a transmission controller which is linked to the means for checking such that a fault report is only
- 15 forwarded if the outcome of the check is negative.

7. Network node (K1) in accordance with claim 6, characterized in that,

- this includes means for detection of a fault, and
  - this includes means for sending a fault report to all
- 20 network nodes directly adjacent to it (K2, K3, K4, K5).

8. Network node (K2) in accordance with claim 6, characterized in that,

- this includes means for continuously sending a message to be acknowledged to all its directly adjacent network nodes
- 25 (K1, K6, K7),
- this includes means for generating a fault report for a network node (K1) from which no acknowledgement was received, and
  - this includes means for sending this fault report to all
- 30 its directly adjacent network nodes (K1, K6, K7).

9. Network node (K2) in accordance with claim 8,

characterized in that,

- this includes means for checking whether all network nodes (K2, K3, K4, K5) adjacent to a faulty network node (K1) identify a fault, and
  - 5 - this includes means for characterizing a fault report such that the fault report relates to the faulty network node itself (K1) if the result of the check is positive, and otherwise the fault report relates to the connection to the faulty network node (K1).
- 10 10. Network node (K2) in accordance with one of the claims 6 to 9, characterized in that,
- this includes means for executing higher-ranking functions, and
  - this includes means for deducing further steps from the
  - 15 reception of a fault report.